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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/752,369 | 12/29/2000 | Patrick Doyle | 042390.P9017 | 2184 |

7590 03/01/2005

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EXAMINER

CHANKONG, DOHM

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2152

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/752,369 | DOYLE ET AL. | |
| | Examiner | Art Unit | |
| | Dohm Chankong | 2152 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1> Applicant's amendment and remarks, dated 11.1.2004, have been received. Claims 1-26 are still presented for further examination.

Response to Arguments

2> Applicant's arguments, with respect to claims 1 and 6, filed 11.1.2004, have been fully considered but they are not persuasive.

Applicant is arguing in substance: a) that the prior art reference [Osten et al, U.S. Patent No. 6,735,660 "Osten"] does not suggest or teach any of the limitations of claim 1, specifically, the requesting of an Infiiband configuration and response to the request; and b) that the prior art of record does not suggest or teach the limitations of claim 6, specifically, the apparatus and means for making the request and response in regards to the Infiniband configuration.

With respect to a), Examiner respectfully disagrees and calls Applicant's attention to [column 8 «line 35» to column 9 «line 8»] of Osten. Applicant suggests that Osten does not teach a request for a configuration. However, by Applicant's own admission on [page 10, lines 3-4], the configuration information is received from another source. And clearly, Osten discloses that the adapter requests the configuration information through the use of a "presence signal" [column 8 «lines 44-50»].

Furthermore, the referenced section details the request of configuration information for the IOA adapter [column 7 «lines 49-53»] where: it is clear that configuration information retrieved for the IOA from a database, the request is in the form of a make or model

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identifier]; a subsequent response being sent based on whether or not the configuration information can be applied to the IOA adapter [column 8 «line 59» to column 9 «line 8» where: Osten discloses signalling an error (or not) if the requested configuration does not match the adapter]; and finally configuring the IOA adapter if the response is not an error [column 9 «lines 1-4»]. Osten also previously discussed that the configuration information might include information of the Infiniband bus (1x, 4x, or 12x) [column 7 «lines 46-49»] and therefore it should be clear that the configuration information retrieved is related to Infiniband connectivity.

Therefore, Examiner believes that Osten clearly discloses the functionality and features of claim 1 as it is written.

With respect to b), Osten discloses a management bus (links) used to request the configuration [column 6 «lines 12-25» | column 7 «lines 9-15» where: the SES processor uses a bus to receive the configuration information from the IOA], as well as a process and apparatus directed towards making the request and response [Figure 2 «item 30» | column 6 «lines 12-31» | column 7 «lines 49-53» | column 7 «line 58» to column 8 «line 21»].

3> Applicant's arguments, see page 10, filed 11.1.2004, with respect to the rejection(s) of claim(s) 7 under 35 U.S.C § 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art.

Claim Rejections - 35 USC § 102

4> The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5> Claims 1-6, 8-22 and 24-26 are rejected under 35 U.S.C 102(e) as being anticipated by Osten et al (hereinafter Osten), U.S Patent No. 6,735,660.

6> As to claim 1, Osten teaches a method comprising:

requesting an Infiniband connectivity configuration (column 7, lines 49-53, claim 8);

receiving a response regarding whether the requested configuration can be provided

(column 8, lines 41-46);

attempting to establish the requested connectivity configuration if the response to the request is affirmative (column 8, line 59 to column 9, line 8).

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7> As to claim 2, Osten teaches a method wherein the requested connectivity configuration is not contained in the specification established for the InfiniBand architecture (column 2, lines 53-65 and column 5, line 57 to column 6, line 11 – since the concept of sideband communications was not in the ‘standards’ for InfiniBand, Osten’s conceptualization of sideband communications in the InfiniBand architecture was not in the original spec).

8> As to claim 3, Osten teaches a method wherein the requested connectivity configuration is comprised of a plurality of links (column 2, line 59 and column 5, line 66 to column 6, line 11 where the signal positions are equivalent to the links) .

9> As to claim 4, Osten teaches a method wherein the requested connectivity configuration is provided using a standard InfiniBand backplane connector (column 5, line 57 to column 6, line 3).

10> As to claim 5, Osten teaches a method wherein said request for a connectivity configuration is made by an Infiniband module to an Infiniband chassis management entity (column 7, lines 9-15, column 7, lines 49-57 and line 58 to column 8, line 14 where the IOA is the module and Osten’s database and processor are collectively functional as a chassis management entity).

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11> As to claim 6, Osten teaches a method wherein said request for a connectivity configuration is made through an InfiniBand management link (column 8, lines 8-34).

12> As to claim 8, Osten teaches a method comprising:

receiving a connectivity configuration request associated with an InfiniBand connector, the configuration request representing an expanded InfiniBand connector configuration including information indicative of one or more desired links to be established through the InfiniBand connector and assigning one or more physical lanes of the InfiniBand connector to each of the one or more desired links (column 7, lines 49-53, column 8, lines claims 8, 9, 14 and 15);

providing a response to the connectivity configuration request indicating whether the requested expanded Infiniband connector configuration can be provided (column 8, line 59 to column 9, line 1); and

configuring the InfiniBand connector in accordance with said connectivity configuration request (column 9, lines 1-8 and claim 13).

13> As to claim 9, Osten teaches a method wherein said connectivity configuration is made by an Infiniband module to an Infiniband chassis management entity (column 7, lines 9-15, column 7, lines 49-57 and line 58 to column 8, line 14 where the IOA is the module and Osten's database and processor are collectively functional as a chassis management entity).

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14> As to claim 10, Osten teaches a method wherein said expanded InfiniBand connector configuration is not contained in the specification established for the InfiniBand architecture (column 2, lines 53-65 and column 5, line 57 to column 6, line 11).

15> As to claim 11, Osten teaches a method wherein said expanded InfiniBand connector configuration is comprised of a plurality of links (column 2, line 59 and column 5, line 66 to column 6, line 11 where the signal positions are equivalent to the links).

16> As to claim 12, Osten teaches a method comprising:

an InfiniBand management link operating to enable the establishment of an InfiniBand connectivity configuration (column 7, lines 43-49 and claim 14), wherein said management link:

records a request for a connectivity configuration made by an InfiniBand module (column 7, lines 49-53 and claim 8);

allows an InfiniBand chassis to obtain said request for a connectivity configuration (column 7, lines 49-52 and column 8, lines 22-31);

records a response from said InfiniBand chassis to said request for a connectivity configuration (column 8, lines 22-31, column 8, line 66 to column 9, line 4, and claim 8);

allows said InfiniBand module to obtain said response to said request for a connectivity configuration (claim 27).

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17> As to claim 13, Osten teaches the method wherein the requested connectivity configuration is not contained in the specification established for the InfiniBand architecture (column 2, lines 53-65 and column 5, line 57 to column 6, line 11).

18> As to claim 14, Osten teaches the method wherein said request for a connectivity configuration is written to a first management link configuration register and said response to said request is written to a second management link configuration register (column 7, lines 16-34 and lines 43-53 and claim 27).

19> As to claim 15, Osten teaches the method wherein the requested connectivity configuration is comprised of a plurality of links (column 2, line 59 and column 5, line 66 to column 6, line 11).

20> As to claim 16, Osten teaches a network apparatus comprising:
an InfiniBand connector (column 6, lines 3-11);
an InfiniBand module to make a request for an expanded connectivity configuration for the InfiniBand connector (column 7, lines 43-57);
a chassis management entity coupled to said InfiniBand module, the chassis management entity to receive the request for an expanded connectivity configuration for the InfiniBand connector and to provide a response regarding whether the requested configuration can be provided (column 7, lines 49-57, column 7, line 58 to column 8, line 21).

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where: Osten's database and processor collectively provide the same functionality of the management entity).

21> As to claim 17, Osten teaches the network apparatus wherein the requested connectivity configuration is not contained in the specification established for the InfiniBand architecture (column 2, lines 53-65 and column 5, line 57 to column 6, line 11).

22> As to claim 18, Osten teaches the network apparatus wherein the requested connectivity configuration is other than:

a single link comprised of a connection to the first pin of a plurality of pins on the InfiniBand connector;

a single link comprised of a connection to the first four pins of the plurality of pins on the InfiniBand connector; or

a single link comprised of a connection to the first twelve pins of the plurality of pins on the InfiniBand connector (column 6, lines 3-11 and claims 8 and 9).

23> As to claim 19, Osten teaches the network apparatus wherein said InfiniBand module is operable to establish the requested connectivity configuration if the response to the request is affirmative (column 8, line 59 to column 9, line 8).

24> As to claim 20, Osten teaches the network apparatus wherein said requested connectivity configuration is comprised of a plurality of links that are provided

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simultaneously through said InfiniBand connector (column 5, line 57 to column 6, line 11 and claim 8).

25> As to claim 21, Osten teaches the network apparatus wherein the InfiniBand connector is a standard InfiniBand backplane connector (column 5, line 57 to column 6, line 3).

26> As to claim 22, Osten teaches the network apparatus wherein said request for a connectivity configuration is made through an InfiniBand management link (column 8, lines 8-34).

27> Claim 24 is a machine readable medium with stored sequences of instructions that performs the steps of the method of claim 1. Therefore, claim 24 is rejected for the same reasons as set forth in above paragraph 4 for claim 1.

28> Claim 25 is the machine readable medium that performs the step of the method of claim 2. Therefore, claim 25 is rejected for the same reasons as set forth in above paragraph 5 for claim 2.

29> Claim 26 is the machine readable medium that performs the step of the method of claim 3. Therefore, claim 26 is rejected for the same reasons as set forth in above paragraph 6 for claim 3.

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Claim Rejections - 35 USC § 103

30> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31> Claims 7 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Osten, in view of Pickreign et al, U.S. Patent No. 6,732,249 [“Pickreign”].

32> As to claim 7, Osten does not specifically teach a method wherein said request for a connectivity configuration is written to a first management link configuration register and said response to said request is written to a second management link configuration register.

33> Pickreign discloses a similar configuration to Osten, i.e. connecting an adapter to a computer network. Pickreign further discloses a method wherein said request for a connectivity configuration is written to a first management link configuration register and said response to said request is written to a second management link configuration register [Figure 1 «items 35-39» | column 2 «line 43» to column 3 «line 2»]. It would have been obvious to one of ordinary skill in the art to incorporate Pickreign’s register functionality into Osten to allow Osten’s adapters and host computer to dynamically communicate data and information effectively and efficiently [column 1 «lines 33-38»]. One would have been

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motivated to perform such an implementation as Osten discloses modifying the communications between the adapter and host using memory [column 7 «lines 55-57»].

34> As to claim 23, as it merely is a claim to a network apparatus that implements the steps of the method of claim 7, it does not teach or further define over the claimed limitations. Therefore claim 23 is rejected for the same reasons set forth for claim 7, *supra*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC


Dung C. Dinh
Primary Examiner